A discussion on new cultural and accounting variables and IFRSs' implementation[:] Empirical study on a sample of Central and Eastern European countries.

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A DISCUSSION ON NEW CULTURAL AND ACCOUNTING VARIABLES AND IFRSs' IMPLEMENTATION. EMPIRICAL STUDY ON A SAMPLE OF CENTRAL AND EASTERN EUROPEAN COUNTRIES

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ABSTRACT

In the context of a growing literature addressing the connection between cultural variables and accounting regulations, the general objective of this paper is to provide a theoretical discussion and empirical evidence on the recent trends in financial reporting on a sample of CEE countries. Thus, the specific objectives of the paper are: 1) to provide an operational definition of culture; 2) to advance a set of cultural variables that we consider relevant for the interactions between culture and the implementation of accounting regulations; (3) to "translate" these variables into a set of specific accounting variables built from a "functional" perspective; 4) to test four hypotheses based on the empirical pool data. The dependent variable is a dummy aiming to capture the specificity of IFRSs' endorsement for unlisted entities in CEE countries and the explanatory variables are our own accounting variables based on a set of cultural ones derived from World Values Survey's questions. The main output of the paper consists in the thesis that the culture in general and the specific accounting values in particular are relevant for the national characteristics of IFRSs' implementation in the sample countries.

KEY WORDS
cultural variables, accounting variables, financial reporting, IFRSs, WVSs, CEE

JEL Classification: C23, M41, M48

INTRODUCTION

Starting with the influential work of Harrison & McKinnon (1986) and Gray (1988), a growing literature addresses the issue of the connections between culture and accounting regulations and attempts to explain and predict, by using such variables, the international differences in financial reporting systems. Several studies have tested Gray's hypothesis including Pourjalali & Meek (1995) which identifies a match between changes in cultural dimensions and the accounting environment in Iran following the 1979 revolution. On the other hand, Amat, Blake, Wraith & Oliveras (1999) link Spain's national culture to the characteristics of the Spanish accounting environment; and Dunn (2002) concludes that cultural and political barriers are some of the most important limitative factors for the international accounting harmonization.

Thus, the general objective of this paper is to provide a simple theoretical framework and some empirical evidence within the fervent debate over the recent developments in Central and Eastern European (CEE) countries' financial reporting. The paper is organized as follows: ***Section 1*** provides an operational definition of culture as the dominant collective mental model that distinguishes a society from another through a learning and inter-generational transmission process. Moreover, this section consists of a literature review on the connection between culture and accounting and of a discussion on several particularities of IFRSs' implementation in the European Union (EU). ***Section 2*** advances a set of cultural variables that we consider relevant for the interactions between culture and the implementation of accounting regulations in general and it provides *a "translation" of these cultural variables into specific accounting ones from a functional perspective*, by identifying several of their specific determinants. ***Section 3*** attempts to provide an empirical support for the thesis of significant connections between the accounting variables and the financial reporting on the sample of CEE countries by identifying some particularities of the accounting regulations in the sample countries and testing four hypotheses based on the empirical pool data; ***Section 4*** includes final conclusions consisting in derived comments, (auto)critic and further research directions.

Therefore, the main output of the paper consists in the thesis that culture in general and the specific accounting values in particular are relevant for the national characteristics of International Financial Reporting Standards' (IFRSs) implementation in the sample countries.

1. THE CONCEPTUAL BACKGROUND

1.1. An Operational Definition of Culture

According to the Merriam-Webster Dictionary, culture is "the act of developing by education, discipline, and social experience" or "training or refining of the moral and intellectual faculties". In a different view, Cozzi (1998) understands by culture a "social asset" whose acquisition by an agent generates no individual utility but has positive external effects. UNESCO (1992)[i] has described culture as follows: "... culture should be regarded as the set of

distinctive spiritual, material, intellectual and emotional features of society or a social group, and that it encompasses, in addition to art and literature, lifestyles, ways of living together, value systems, traditions and beliefs". Such definitions are more focused on the static aspects of culture as given social artifacts. However, *cultural characteristic are changing over time; the content of the shared intellectual products does not remain the same over long time spans.* Societies are reacting to the variation of the external and internal environment. So that, a more comprehensive view of cultural paradigm admits that its architecture is "stable" only in a "short enough" time horizon.

Nevertheless, we agree with the definition of ***cultural paradigm*** provided in Talpoş et al. (2005: 20): "Through paradigm we understand the dominant collective mental model that individualizes a society from another. This paradigm represents a societal integration factor, by offering common values and goals for the members of the society. Also, this represents the subject of some learning and inter-generational transmission process, which slowly modifies itself, in <long cycles>".

Hence, we consider the cultural paradigm as representing *much more* then a set of "shared values". Similarly, one could remark that an interesting definition of culture as "shared values" was given in 1952 by Kroeber & Kluckhohn (cited in Adler, 1986). According to them, culture consist of patterns, explicit and implicit of and for behaviors acquired and transmitted by symbols, constituting the distinctive achievement of human groups, including their embodiment in artifacts; the essential core of culture consists of traditional (i.e., historically derived and selected) ideas and especially their attached values; culture systems may, on the one hand, be considered products of action, on the other conditioning elements of future action.

In consequence, culture is:

- Something that is shared by all or almost all members of a social group;
- Something that the older members of the group try to pass on to the younger members; and
- Something (as in the case of morals, laws and customs) that shapes behavior, or structures one's perception of the world.

From this point of view, our vision is much closer to Hofstede (1991) who defines culture as "the collective programming of the mind which distinguishes the members of one group or category of people from another". Like him, we emphasize that culture is, at least partially, learned, and not only inherited.

The key points of our argumentation may be resumed as follows: (1) the accounting standards could be seen as "cultural artifacts"; (2) their implementation depends on the specificities of the "accounting sub-paradigm".

Accounting is not only a business function but also an expression of the societal concern for the nature and quality of production and distribution mechanisms as well as for their impact at a global scale. Therefore, the setting of a given set of financial reporting standards is influenced by the "institutional" consequences of cultural paradigm such as legal system (especially the

pattern of property rights), the production structures and relationships, the "safety networks" (such as social security, pensions, etc.) or the social output distribution mechanisms. In other words, the architecture of the accounting standards will vary over the main societal axes depending on the society's approaches to questions like the "natural" or "given" social subjects rights, the organization of the economic system, the social power relations and the treatments of marginal/ discriminated / disadvantaged social groups, the social reactions to societal risks and uncertainty. The adoption of norms, rules and regulations (including the accounting ones) could be done in a different institutional framework shaped by different societal values and preferences. Using our own terminology, we could label different approaches to the design this institutional framework as:

- *The leadership case* - the regulations are issued under the influence of the societal leadership centers and reflects their "long term" interests;
- *The technocracy case* - the regulations are the products of "technocratic" bodies supposed to control the expertise in the involved fields of social issues;
- *The business case* - the regulations are business issued and derived directly from the practice;
- *The politic case* - the regulations are deriving from the activity of the formal political legislative and executive centers and they emerge as a result of political consensus / compromise.

The society will set a certain configuration of the hierarchical relations between these possible cases and entrust a certain *social mandate* to the involved bodies according to its specific cultural values. So, the regulations are linked to the cultural paradigm from the first moment of their elaboration and issuance.

But such influences of culture on regulatory framework are not limited to the elaboration processes: thus, they should be equally emphasized in the implementation ones. Since societal culture as a whole is a collective model adjusted in "long cycles", the transposition of the regulations in practice will *inter alia* depend on the particular "sub-cultures" of the entities endorsing those regulations. The respective "sub-models" derive from the general paradigm, but these are more flexible and more predisposed to change under the impact of the current conditions. For instance, from an *institutional and structural* perspective, the accounting standards will be the product of the global cultural values; but their implementation and *functional* results will be much more connected to the specific *accounting values*. In this sense, each study on the practical use of the standards should include a *backward analysis* – going from the functional aspects as they are modeled by the accounting values to the broader contextual influence of the global cultural values.

With these features, a ***compact model of the regulation mechanisms*** could be formally described as:

$$r_{i_t} = \lambda_{1_t}\left[E_t\left(I^*_{i_t}\right) - \sum_{j=1}^{t-1} I_{ij}\right] - \\ - \lambda_{2_t}\left(k^a{}_{it} + E_t\left(k_{i_t}\right)\right) - \lambda_{3_t} E_t\left(C_t\right) + E_t\left(\varepsilon_t\right) \quad (1)$$

where r_{i_t} is a state variable which describes the regulatory conditions for a certain issue *i* in the current period *t*; *I** is an output index describing the results in the presence of regulations as *I* status for the output index in the absence of such regulations; k^a are the current adoption costs for the regulatory set as *k* describes the imposing/supervising/punishing costs. *C* is a set of cultural variables characteristics of the **paradigm**; ε is a "black box" which counts for the influence of other "hidden" variables; and $\boldsymbol{\lambda_I}$, $\boldsymbol{\lambda_2}$ are the relative sensitivity coefficients.

We assuming that *I** could be written as:

$$I^*{}_{i_t} = \sum_{l=0}^{\infty} \beta_I{}^l \left(I_{i_{t+l}} + \phi^I{}_i + \eta^I{}_{i_{t+l}}\right) (2)$$

where $\boldsymbol{\beta}$ is a discount factor, $\boldsymbol{\varphi^I}$ is a state effect that captures the role played by "fix" elements able to affect the regulations' impact and $\boldsymbol{\eta^I}$ measures the "omitted" specific factors. As a further step, we suppose that the expected future output could be predicted inside a *mix* mechanism by incorporating both past and current values[ii]:

$$E\left(I_{i_{t+l}}\right) = c_{Il}(L) I_{i_t} + c_I{}^r I_{i_t} \quad (3)$$

where *L* is the lag operator.
Similarly,

$$k_{i_t} = \sum_{l=0}^{\infty} \beta_k{}^l \left(k_{i_{t+l}} + \phi^k{}_i + \eta^k{}_{i_{t+l}}\right) (4)$$

with $\boldsymbol{\varphi^k}$ the "fix" component of maintaining the regulations and

$$E\left(k_{i_{t+l}}\right) = c_{kl}(L) k_{i_t} + c_k{}^r k_{i_t} \quad (5)$$

Since cultural variables adjust in "long cycle", it is possible to consider under a "short enough" time period that:

$$E_t\left(C_{i_t}\right) \approx C_i \quad (6)$$

The deviations reflected by ε_t are a result of the specific particularities on the implementation. So that:

$$E_t\left(\varepsilon_{i_t}\right) \approx h\left(C_{i_t}\right) \approx C^S{}_{i_t} \quad (7)$$

where $C^S{}_{i_t}$ describes the "sub-paradigm" of the bodies entrusted with the implementation and appliance of the standards and h is the "translation function" from "general" to "particular" (from the characteristics of the general paradigm to the elements of the involved "sub-culture").
Relations (1) - (7) could be combined in order to obtain:

$$r_{i_t} = \lambda_{1_t}\left[\sum_{l=0}^{\infty}\beta_I{}^l\left(c_{Il}(L)I_{i_t} + c_I{}^r I_{i_t} + \phi^I{}_i + E_t\left(\eta^I{}_{i_{t+l}}\right)\right) - \right.$$
$$\left. - \sum_{j=1}^{t-1} I_{ij}\right] -$$
$$- \lambda_{2_t}\left[k^a{}_{it} + \sum_{l=0}^{\infty}\beta_k{}^l\left(c_{kl}(L)k_{i_t} + c_k{}^r k_{i_t} + \phi^k{}_i + E_t\left(\eta^k{}_{i_{t+l}}\right)\right)\right] -$$
$$- \lambda_{3_t} C_i + C^S{}_{i_t} \quad (8)$$

According to relation (8), it could be formulated the next general hypothesis of the proposed analysis:

H: *In* ***caeteris paribus*** *conditions the regulatory status of an individual issue will vary according with the "sub-paradigm" of the bodies involved in the implementation/application of the specific standards.*

1.2. How Does Culture Interfere with Accounting?

The purpose of this section is to review the main international studies referring to how culture interferes with financial reporting. Thus, we will make reference to Hofstede's cultural dimensions model (Hofstede, 1980, 1991, 2001) and then to Gray's accounting values.

Hofstede and the key cultural dimensions

Considered to be the father of the cultural dimensions modeling, Hofstede (2001:1) specified that culture "manifests itself not only in values, but in more superficial ways: in symbols, heroes, and rituals". Beginning from such a premise, Hofstede created a model in which cultural differences and their consequences on national, regional and international level can be described. Based on an attitude survey of a multinational entity's employees (IBM) in 66 countries during the 1970s, Hofstede developed country-based indices corresponding initially to four dimensions of national culture for each and every country surveyed, later on adding a further dimension (Hofstede & Bond, 1988) – which all were meant to reflect Eastern and Western values alike.

These key dimensions may be described as follows:

- *Power distance* - represents the extent to which the less powerful members of a society accept that power is unequally distributed;
- *Individualism* - describes individualistic societies as communities where there are few ties beyond those of the nuclear family, while the opposite societies - collectivist - are characterized by stronger cohesive in-group ties;
- *Masculinity* - opposes "masculine" societies and "feminine" societies. In the first case, men are confident, tough, and more concerned with material and professional success,

while women are modest and more concerned in the quality of life, by being. In the other case, both men and women are equally concerned with quality of life;

- *Uncertainty avoidance* – reflects the extent to which people feel threatened by unknown/uncertain situations;
- *Long-term pragmatism* - represents the extent to which people favor a pragmatic vision over a short-term thinking. In order to design this dimension Hofstede undertook a Chinese Value Survey.

In spite of the long time success of the model and of the numerous business-related and psychological research studies either based on or validating it (Hoppe, 1990; Sondergaard, 1994; Barkema & Vermeulen, 1997, Ding, Jeanjean & Stolowy, 2004), this cultural dimensions model has been constantly challenged respectively criticized by several researchers (Bond, 1988; Smith, Dugan, & Trompenaars, 1996 respectively by Gernon & Wallace, 1995; Baskerville, 2003). For instance, whereas Smith, Dugan & Trompenaars (1996) analyzed the replicability of Hofstede's methodologies, Gernon & Wallace (1995) debated over the application of Hofstede's cultural dimensions.

Among the criticisms brought to the Hofstede's approach there are: the survey was referring to one organization and may not be applicable to other circumstances (Gernon & Wallace, 1995: 85); "the embedded-ness of the four dimensions in the social, political or economic measures indicates that the dimensions […] describe characteristics of different nations, most of which could be identified as socio-economic in origin" (Baskerville, 2003); the IBM data are now obsolete. To the last of these criticisms, Hofstede (2001:73) replied that because the dimensions were supposed to have centuries-old roots, only the stable data from his surveys had been kept.

Gray and the accounting values

Based on Hofstede's model, Gray (1988) introduced the first four cultural dimensions into accounting, by creating the following accounting values:

- *Professionalism versus statutory control* - refers to a preference for the use of individual professional judgment and the preservation of professional self-regulation over the option to comply with the regulatory requirements and statutory control;
- *Uniformity versus flexibility* - implies a preference for the enforcement of standardized accounting practices and the consistent use of these over time versus a preference for flexible practices in accordance with the particular circumstances in which an individual company may operate;
- *Conservatism versus optimism* - opposes a preference for a cautious approach to measurement which will allow a company to handle easier uncertain future events, versus a risk-taking approach.
- *Secrecy versus transparency* - describes a preference for disclosure of financial information only to those closely involved with the management of the respective company, seldom resulting in a restricted access for the other interested categories as opposed to a more transparent, open and publicly accountable approach.

1.3. Some of the Particularities of IFRSs' Implementation in the European Union

The European accountancy undertakes the most significant revolution since the issuance of the IVth Directive in 1978. Since 2005, *IAS Regulation* (Regulation No.1606/2002/EC) has required European companies listed in a European securities market to use ***International Financial Reporting Standards (IFRSs)*** for preparing their consolidated financial statements. This requirement affected almost 8000 European listed companies. In addition, Article 5 of the IAS Regulation allows Member States to permit or require the unlisted entities to draw up their individual and consolidated financial statements according to IAS.

There is no doubt that IAS Regulation and the subsequent Directives on financial reporting share a common vision on the link between international accounting harmonization/ convergence and globalization. The first concept could be perceived as an internationalization of accounting by promoting accounting standards in which the global interest prevails in front of the national one (Volker, 2000; Cooke, 2001). The evolution of an increasingly real and nominal integrated global economy, the changes in the architecture of the international financial system, the predominance of multinational entities, the consequences of technological and informational transfers - all these require an increased harmonization of the accounting practices. Thus, IFRSs arise as a product of the globalization forces, becoming the best choice for many national authorities in ensuring transparency and comparability of the financial information. The main reason for this is the fact that a "symbolic economy" implies uniform mechanisms for efficiency estimation, since the economic subjects are in a certain sense "detached" from the objects of their decisions.

Some years ago it became obvious that a choice must be made between **US GAAP** and, respectively, **IAS/IFRSs**. However, in the last decade, IFRSs have gained a wider acceptance, so that nowadays almost 110 countries around the world have adopted the issued version or plan to adopt or converge with this set of standards with some different modifications / limitations. In this context, FASB and IASB are determined to find a mutual compromise of adopting compatible and high quality solutions for present and future accounting issues. For this purpose, two memorandums of understanding were signed during the years (2002 – *Norwalk Agreement*; 2006). Still, the convergence process is far from being complete and there is not a clear short-run perception for a single international set of standards compatible with both sets of standards.

For the proposed analysis, the identification of IFRSs' main characteristics is essential. Thus, we have structured some of the features as follows:

- A formal set of regulations with a clearly structural internal organization of the information and a uniform prescription of the accounting treatments to be applied;
- A "multi-authority" decisional result since a large number of bodies is involved (IASC Foundation that names the members of the Board and IFRIC, IASB which issues the standards, IFRIC responsible with the issuance of standards' interpretations, SAC which provides advisory support – all these being separate but interlinked structures; the European

Commission with its entire network of bodies with analysis and advisory duties – EFRAG, TEG, SARG, ARC, Contact Committee, roundtable; the national regulators and so on);
- A product of a specific cultural and business environment - the Anglo-Saxon one - destined to be assimilated in various other environments characterized by different cultural paradigms;
- The IFRSs appliance is a "work in progress" under a significant time horizon so that there are some limitations of the "short-run" argument.

If these postulates stand, it should be noted that in the particular case of the CEE countries which are EU Member States, a discriminate analysis is applicable only for domestic unlisted entities since all the listed companies are required to use IFRSs. In this context becomes obvious that the decision of the CEE countries - UE Member States – to permit or require the domestic unlisted entities to draw up their individual financial statements according to IAS/IFRS is still question to the cultural particularities of each state.

2. BUILDING NEW SETS OF CULTURAL AND ACCOUNTING VARIABLES

2.1. Building a New Set of Cultural Variables

The starting point of our research is represented by the observation that Gray's accounting values (1988) have a „structural" nature. More precisely, these describe the organization of the accounting framework, the institutional network, the accounting regulations and rules' setting as well as the relative preferences in accounting treatments, transparency, completeness and risk aversion.
Due to the complexity and variety of the real situations, such an approach generates difficulties in the measurement of accounting values and explains the non-homogeneous results of the different studies carried on this issue.

Since Gray (1988) has linked his accounting values to Hofstede's cultural dimensions model, numerous researchers were inspired to find empirical evidence on the subject (Belkaoui, 1989; Perera, 1989; Perera & Mathews, 1990; Chow, Chau, & Gray, 1995; Hussein, 1996; MacArthur, 1996; Roberts & Salter, 1999). Salter & Niswander (1995) tried to test Gray's theory on a sample of 29 countries, but the study revealed serious problems in the measurement of the accounting values, the results including a negative relationship between uniformity and uncertainty avoidance, in contrast to Gray's prediction. On the other hand, Chanchani & Willet (2004) tested the accounting values on the financial statements' uses in India and New Zeeland and their results validated in some way Gray's hypotheses concerning professionalism and uniformity.

In this context, a possible alternative approach may consist in the attempt to describe the accounting values from a functional perspective. In other words, we consider starting not from the description of the financial reporting system, but from the way it is actually endorsed. This

presumes shifting the focus from norms and institutions to norms' implementation mechanisms and the assessment of their relative efficiency. The minimal steps of such an approach include:

1. to identify the common functional characteristics of the contemporary financial reporting systems;
2. to identify the discriminants which explain the existing differences among these systems;
3. to emphasize the estimation modalities of the informational efficiency of the financial reporting systems and those of the principles which may lay at the base of the empirical assessment of these.

It can be noticed that such an approach may imply a high doze of subjectivism, since the appraisal of the way in which the financial reporting systems are structured and work is shaped by the set of relative preferences of the standard setters and main financial information' users. In consequence, the cultural paradigm in which these systems are conceived and implemented plays a critical role in their *ex ante* and *ex post* assessment. Thus, defining a set of accounting values must take into consideration the accurate manifestation of the constituents of this paradigm. Or, the appeal to the cultural dimensions proposed by Hofstede (1980, 1991, 2001) may generate a series of difficulties among which their Western focused nature and, on the other hand, the problems associated to their operationalization. A solution to this problem is represented by the use of World Values Surveys' (WVSs) data.

In 1981, Jan Kerkhofs and Ruud de Moor - leaders of the European Values Survey group (EVS) - launched a study which will turn into today's World Values Surveys. Because of the success of the EVS' surveys carried out in ten West European societies, the project was replicated in fourteen additional countries. The findings of these surveys suggested that "predictable cultural changes were taking place".

Nowadays, The World Values Survey[iii] is organized as a network of social scientists brought together by a common interest: "to understand ongoing social changes that are transforming peoples' worldviews and basic motivations". It is coordinated by a central body, the World Values Survey Association, which is a non-profit association seated in Stockholm, Sweden. Also, the WVSs' data have become increasingly renowned in recent years, and have been used in hundreds of publications in more than twenty languages.

To monitor the cultural changes, four waves of Values Surveys were carried out in 1981, 1990-1991, 1995-1996 and 1999-2001, while a fifth wave took place in 2005-2006. The World Values surveys were designed to test the hypothesis that economic and technological changes are changing the basic values and motivations of people. This database allows the examination of relationships between public values and economic growth; or between environmental pollution and mass attitudes toward environmental protection; or those between political culture and democratic institutions. The usefulness of these data has grown as the surveys are now providing a wider coverage of the world's societies, and as the time coverage increased. The last wave includes more than 80 independent countries amounting to almost 85% of the world's population.

Based on the WVSs' data, we have selected those questions which influence in a direct manner the financial reporting systems and have subsequently transposed these generic values in specific accounting values. This approach in three steps has the following advantages:

a. provides a consistent explanation on conceptual level of the way in which the mechanisms subordinated to the accounting systems are designed;
b. explains how the cultural values adjustable on long cycles are susceptible to influence the organization and functionality of financial reporting, which is object to much faster transformations in medium and short cycles;
c. allows the operationalization and testing of explicative models built based on these values;
d. allows the formulation of normative statements based on emphasizing the best practices.

It is important to emphasize the fact that the translation of the WVSs' data in accounting values can be facilitated by a set of "intermediary cultural values" as a result of selecting those cultural data potentially susceptible to influence the accounting systems. Their nature of "transitional variables" derives from the fact that these are not actually principles incorporated in the basis of the financial reporting systems, *rather representative descriptors of the configuration of standard setters' relative preferences*.

Thus, in our paper we have built such a set of transitional variables based on WVSs' data. In this matter we are referring to the fourth wave of surveys carried out by WVSs in 1999-2001 in sixty five societies, many African and Islamic societies being included in the analysis for the first time.

Insert Table 1

We have grouped these questions according to their specificity, afterwards proceeding at building a specific set of cultural variables with impact on financial reporting:

1. ***Freedom of initiative*** - estimates the relative importance of free individual initiatives on personal level and within economic structures. The variable is defined as " the individual initiative is NOT important" and is measured as:

$$nofreedom = 0.33 * \ln\left(\frac{100}{A173}\right) + 0.33 * \ln\left(\frac{100}{C016}\right) + 0.33 * \ln\left(\frac{100}{C034}\right) \quad (9)$$

2. ***Work significance*** - takes into account the relative importance of work during the individual life time. It could be noticed that this variable is more focused on *importance* of work and less on *work ethics*. The variable is computed as "work is NOT important":

$$nowork = \ln\left(\frac{100}{A005}\right) \quad (10)$$

3. ***Social hierarchy significance*** - describes the relative acceptance of social hierarchy defined as "In society and in economic entities the hierarchical managerial style DOES NOT prevail":

$$nohierachy = \ln\left(\frac{100}{C061}\right) \quad (11)$$

4. ***Social justice significance*** - intents to capture the importance that justice and "follow the rules" behavior have in the social game. The variable is defined as "The social justice and the social norms and rules are NOT important" and computed as follows:

$$nojustice = 0.25 * \ln\left(\frac{100}{F114}\right) + 0.25 * \ln\left(\frac{100}{F116}\right) + 0.25 * \ln\left(\frac{F145}{100}\right) + 0.25 * \ln\left(\frac{F146}{100}\right) \quad (12)$$

5. ***Risk aversion*** – describes the attitude towards risk at social and individual level and is defined as " The job security and the capacity to improve the immediate family life are NOT important" being computed as:

$$noriskaversion = 0.5 * \ln\left(\frac{C013}{100}\right) + 0.5 * \ln\left(\frac{100}{E163}\right) \quad (13)$$

2.2. Building a Correlated Set of Accounting Variables

A subsequent step derives from the necessity to transform these transitional values in accounting values. Such a procedure must be based at least on the following rules:

- The final outcome has to be a "positive" one and not a normative one. More precisely, it must be avoided the *a priori* establishment of those principles which might generate the first order best solution for the architecture of the financial reporting systems. Instead it must refer to the main objective - the elaboration of a set of variables whose descriptive capacity is maximal;
- The final outcome must have a strong operational nature. More precisely, the way in which the accounting variables are defined must allow their easier assessment and reflect the possible changes in their value during different periods of analysis;
- The new accounting variables have to be auto consistent, to avoid ambiguities in classifying the financial reporting systems and maintain a bi-univocal correlation with the transitional variables which generated them;
- The new accounting values must present a minimal informational discrepancy in comparison with the cultural paradigm. We must keep in mind that the accounting values have to allow "cross-system comparisons" among financial reporting systems from distinct economic, social and cultural environments. Hence, it is essential to pursue the achievement of a more extensive nature of these values as well as the preservation of their explanatory potential in comparison with the need to distinguish between "hard" economic and

institutional determinants and respectively "soft" social and cultural determinants which shape the architecture of the accounting systems;

- The accounting values must focus on emphasizing the functional aspects specific to financial reporting systems. Of course, it is a less plausible possibility to completely neglect the institutional aspects and the links between the inherent mechanisms of these systems. So, this request can be formulated in a weaker version namely as the informational weight of the functional descriptors in the accounting values to be prevalent.

Such a set of accounting values may be formed of:

1. ***Functional conformism*** - the application of norms, regulations and procedures is done faithfully according to their formal description. This variable is interlinked to ***freedom of initiative***: the less important the individual initiatives are, the higher the degree of functional conformism. In this context, the accounting norms will be applied "as such" in a homogeneous manner and particular situations tend to be avoided;
2. ***Functional transparency*** - the application of norms, regulations and procedures is accomplished with the purpose of gathering, synthesizing and transmitting a greater volume of financial information. This variable is interlinked to ***work significance***: the more important the work is, the more profound the tendency to reach a detailed understanding of the financial statements to the prejudice of rapidity in gathering and use of financial information.
3. ***Hierarchical selectivity*** - the information gathered in a given financial reporting system is allocated in a partitioned manner according to the existing hierarchical structure. This variable is interlinked to ***social hierarchy significance***: the more rigid the hierarchy is, the less transparent the informational circuit; the more synthetic information is reserved to the higher hierarchical levels;
4. ***Social subordination*** – the organization and function of the accounting systems is meant to facilitate not only the achievement of economic and financial objectives but also the fulfillment of assumed obligations towards the community in conformity with the corporate social responsibility. This variable is interlinked to ***social justice significance***: the more important the respecting of the norms and rules of the "social game" is, the more the accounting systems must emphasize not only the standard economic performance but also the impact that the economic entities have on the social environment;
5. ***Cautious approach*** - the application of norms, regulations and procedures is done in order to minimize the risks of producing errors and incomplete, distorted and obsolete/ untimely information. This variable is interlinked to ***risk aversion***: the deeper the social and individual tendency to reject risks is, the more focus is on the completeness, accuracy, auto-consistency and relevance of the output of financial information's gathering and administration.

2.3. Identifying the Particularities of the Proposed Accounting Variables

In this paragraph we intend, on one hand, to explain the relative preference for the proposed accounting variables referring to Hofstede's cultural dimensions as determinants of this preference, and on the other to emphasize certain similarities to Gray's model.

- ***Functional conformism***

In general, conformism could be defined as "the inclination of an individual to change spontaneously (without any order or request by anyone) his judgments and (or) actions to conform the <socially prevailing> judgments and (or) actions" (Luzzati, 1999, 113). In the context of our proposed value, conformism could be understood as an auto-limitation of the accounting practitioners to adopt "independent" attitudes in respect to the regulatory framework and to exercise their professional judgment to discriminate between the individual cases of norms, rules and procedures' applications. This should be seen as a separate issue from the matter of the extent to which the accounting profession should be subject to a public statutory control: once the regulations are issued, no matter in what way, a ***functional conformist*** attitude implies an implementation as *per se* without any "deviations" generated by adaptations to practical cases.

The degree of conformism decreases with an increase in the social importance of ***freedom of initiative***: "A preference for independent professional judgment is consistent with a preference for a loosely knit social framework where there is more emphasis on independence, a belief in individual decisions and respect for individual endeavour" (Gray, 1988, 9).
However, these two aspects are inter-linked: the more self-regulated the accounting practice is, the greater the possibilities to adjust the rules to a complex field of application and to exercise an individual professional judgment.

Currently, there is an important controversy in the developed countries about the limits of the private self-regulations. For instance, in the Anglo-Saxon area there is a long tradition for the development of professional associations and a lower level of conformism *(our measure suggests that the degree of conformism is more reduced in United States that in United Kingdom)*. But this started to change under the impact of the recent financial instability and as a response to numerous financial frauds reported after the longest sustained period of economic expansion of United States economy. As Arthur Levitt, the ex-SEC chairman, had noticed in a PBS / FRONTLINE 2002 interview a case like Enron "it's symptomatic of a breakdown of the ethical values of business over a period of perhaps 20 years, a gradual erosion of business ethics that brought us to an Enron, but might very well bring us to a whole host of Enrons as we move down the road".
In this context, The Sarbanes-Oxley Act (2002) created the *Public Company Accounting and Oversight Board* (PCAOB) in order to respond to the concerns that self-regulation of the accounting profession had failed to protect investors from poor quality audits. The objective was to improve the accounting practices, to strengthen the rules that assured the independence of

corporate auditors, to increase the accountability of company managers and to enhance the quality of financial reports issued by public companies. After six years, the results are still mixed, with notable improvements in the financial reports' quality but with an increase in associated costs, a larger number of bureaucratic procedures and more frequent restatements. Furthermore, reviewed firms have advance notice of PCAOB inspections, and as a result they may still be able to hide deficiencies from the inspectors. It could be predicted that the actual financial crisis will boost the changes and will lead to an increased importance of the PCAOB (and others bodies) in the supervisory process. Of course, one of the most important issues will remain the fact that US GAAP are mainly "rule-based", being a set of complex and detailed accounting rules that leave little room for individual judgment, in opposition with more "principle-based" IFRSs.

In the European Union's Member States the situation is more heterogeneous, but generally there is a greater focus on *exact* implementation of an extended set of prescriptive legal requirements. Of course, we must consider the harmonization impact exercised by the European Union's Directives. Among them, the *Markets in Financial Instruments Directive* (*MiFID* - Directive 2004/39/EC) subsequently amended (Directive 2008/10/EC), that provides a harmonized regulatory regime for investment services across the 30 Member States of the European Economic Area (the 27 Member States of the European Union plus Iceland, Norway and Liechtenstein), appears to be the cornerstone of the *European Commission's Financial Services Action Plan*. The main objectives of the Directive are to increase competition and customer protection in investment services and to introduce the concept of "maximum harmonization" which places more emphasis on home state supervision.

- ***Functional transparency***

The participants at a 2002 "Enhancing Financial Transparency" symposium organized by Federal Deposit Insurance Corporation have argued : "One of the largest problems facing today's investors is that poor quality financial reports preclude effective, informative fundamental analysis. The reasons for inaccurate financial reporting are varied - a small, but dangerous, minority of companies actively intends to defraud the investor, while others may set forth information that is misleading but technically conforms to legal standards"[iv]. The *transparency* of the financial statements acts on the economic output, social productivity and the value-added by economic entities and sectors through various channels: (a) investments' selection - the identification of better resources allocation' decisions by taking into account the return to risk ratio; (b) the reduction of informational asymmetry; (c) the accountancy of managerial decisions from the shareholders and stockholders point of view. In our opinion, *transparency* is a multi-level concept connected with: (1) the *completeness* of data - the volume of information shared to the public should be as large as possible, the referring time-span should cover a large enough historical period and the complexity of the financial statements should ensure the necessary disclosures; (2) the *easy access* - the information should be provided in such manner that the public could access it without supporting the supplementary costs searching for / waiting for / obtaining it; (3) the *understandability* - the data should be displayed

in the simplest and most logic form, keeping the redundancy and the technical, unnecessary elements under a "critical level"; (4) the *reliability* – the accuracy of the data should be preserved along with their auto-consistency.

Since any economic decision based on financial information will imply the increase of "hidden costs" and risks of failure with a decrease in *transparency,* it could be argued that the social relative preference for improving the *transparency* of the financial statements will be greater in countries with a greater preference for *uncertainty avoidance*. A debatable aspect is the linkage between *transparency* and *uniformity* of accounting standards and reporting procedures: the existence of a detailed regulatory written set and its rigid application does not necessary mean that the output will be always complete, easy to access, comprehensible and reliable, if by construction it is destined to be opaque. And even more, the set may be designed to fulfill the necessary characteristics to ensure a high degree of transparency however, when transposed in practice it could be applied formally correct, but denatured or obscure in content. Finally, ***functional transparency*** may be seen as a result of *respecting the rules* if these rules are built according to the transparency principle.

The "field situation" varies from one country to another. For instance, the United States can be described as characterized by a state of "financial reporting complexity" generated by the large number of different bodies with interest in the elaboration of accounting standards and norms (Financial Accounting Standards Board - FASB-, Emerging Issues Task Force, US Securities & Exchange Commission, and American Institute of Certified Public Accountants). Each of these bodies has its own agenda with some important differences between them. This fact led to the existence of a large corpus of standards, interpretations, opinions, implementation guides, industry guides and so on, that range from general to specific and may display some areas of inconsistency. Or, in Scott Taub's words: "Those detailed rules, bright lines, and exceptions in the standards and in subsequent interpretations and rulings have often overwhelmed the basic principles that underlie many of the accounting standards. Rather than easing implementation and promoting greater consistency in reporting as intended, detailed rules and bright lines instead may reinforce a focus on blind adherence without due regard to the principles those rules are intended to support" (testimony before "The House Financial Services Subcommittee on Capital Markets, Insurance and Government Sponsored Enterprises", March 29, 2006)[v].

In the European Union, the *Transparency Directive* (Directive 2004/109/EC) covers a range of issues including dissemination of financial information, notification of major shareholdings and new requirements for the content and timing of periodic financial information. The Directive confirms the "home country principle", prohibiting other Member States from imposing more stringent disclosure requirements on an issuer than those already imposed in its home Member State. This is along the same lines as the *Prospectus Directive*. Still, the *Commission's Action Plan on Modernizing Company Law and Enhancing Corporate Governance in the EU* proposed that greater transparency should be required from unlisted companies.

However, in developing countries, the costs associated with IFRSs' implementation, the poor infrastructure, the lack of accountants' experience, the power of bureaucracy, the corruption and the complexity of local situations had determined heterogeneous results in assuring the ***functional transparency***. For the moment, the efforts of international bodies such as *Intergovernmental Working Group of Experts on International Standards of Accounting and Reporting* (**ISAR**) are leading only to limited results.

In our opinion, an interesting approach to validating functional transparency is to test it against another methodology and check for similarities. For instance, the *Milken Institute* computes an ***Opacity Index*** which measures "the costs and preponderance of high-frequency, low-impact risks resulting from corruption, a lack of due process, poor regulatory enforcement, and non-standard reporting practices, each of which adds substantial costs to global business" (Kurtzman & Yago, 2008:1). The Opacity Index ranges from 1 to 100; the higher a country's score, the greater its opacity. Each component of opacity - (C) corruption, (L) legal systems, (E) enforcement policies, (A) accounting and disclosure standards, and (R) regulatory quality - is rated separately and contributes to the country's overall opacity rating. The comparative results for a common sample of 38 countries (2006-2007 values of the *Opacity Index*) are displayed in Table 2.

Insert Table 2

One could notice that the ranks reveal a certain degree of compliance with United Kingdom appearing as "the most transparent country" and Philippines / Nigeria as "the less transparent ones". Also, the rank decreases as the country income declines (Graphic 1), which is consistent with the predicted relative importance for the existence of necessary resources in the corresponding standards and mechanisms able to ensure the *transparency*.

Insert Graphic 1

For European countries, the ranks are quite similar as the Union embraces uniform codes and streamlined regulations for corporate governance and company laws.

- ***Hierarchical selectivity***

This variable has some common characteristics with Gray's *secrecy versus transparency*. But the "secrecy" is linked more to the architecture of the internal / external informational system. ***Hierarchical selectivity*** is related to a *partitioned view* of the financial information circuit being a reflection of the principle "you know only what you should know". As Gray (1988:11) argues: "secrecy can be linked most closely with the uncertainty-avoidance, power-distance and individualism dimensions. A preference for secrecy is consistent with strong uncertainty avoidance following from a need to restrict information disclosures so as to avoid conflict and competition and to preserve security. A close relationship with power distance also seems likely in that high power-distance societies are likely to be characterized by the restriction of

information to preserve power inequalities. Secrecy is also consistent with a preference for collectivism, as opposed to individualism, with its concern for those closely involved with the firm rather than external parties. A significant but less important link with masculinity also seems likely".

In more rigid hierarchical managerial structures, there is a pronounced degree of information partition: its distribution strictly follows the hierarchical chains; only the chief officers, significant stockholders and (just in some cases) the public authorities / main creditors are able to perceive "the whole picture". As a consequence, the financial information has a higher asymmetry being less transparent to the personnel, middle and operational management (and to some extent to the investors). Also, a lower consideration for the individual initiative allowed the bureaucracy within the companies to have an extended control over the information distribution process.

The *selectivity* is determined by the nature, contents and extent of the "management accounting" /"controlling" norms and procedures. The *Institute of Certified Management Accountants* (ICMA) states "A management accountant applies his or her professional knowledge and skill in the preparation and presentation of financial and other decision oriented information in such a way as to assist management in the formulation of policies and in the planning and control of the operation of the undertaking. Management Accountants therefore are seen as the <value-creators> amongst the accountants. They are much more interested in looking forward and taking decisions that will affect the future of the organization, than in the historical recording and compliance (scorekeeping) aspects of the profession". In the "management accounting" / "controlling", information can be gathered from various fields and functions within an organization, such as information management, treasury, efficiency auditing, marketing, valuation, pricing or logistics. The question is: How is this information distributed along the hierarchical chain, what kind of aspects could be known by the operational / middle management and what aspects are only reserved to senior officers, shareholders / stakeholders, credit institutions, fiscal authorities and others groups of interests?

The problem could be addressed inside the *agent theory* framework: what type and how much information is shared by different substructures of a given entity depends on the "power balance" between these. Since a company could be seen as a "nexus" of contracts between stockholders as the *principal* and the top executives and the tiers as *agents*, it could be argued that the so-called *Informativeness Principle* should be taken into account in establishing the degree of *informational selectivity*. When information is imperfect (asymmetric, non-uniform distributed and costly) this principle states that any measure of performance that (on the margin) reveals information about the effort level chosen by the agent must be included in the *compensation contract*. This includes, for example, *Relative Performance Evaluation* – measurement relative to other similar agents, so as to filter out some common background noise factors, such as fluctuations in demand. By removing some exogenous sources of randomness in the agent's income, a greater proportion of the fluctuation in the agent's income falls under his

control, increasing his ability to bear risk. There is therefore an "optimal quantity" of information collected in "management accounting" / "controlling" processes that should be distributed to the different *agents* depending on their *hierarchical position* in respect to the *principal*. Of course, this "optimal" level of distributed information depends, *inter alia*, on the *information gathering cost*: as this increases, the level of distribution could decrease.
But the new informational technologies change the situation in terms of levels and structures of such costs. For instance, Mahler & Regan's (2005) study of the effect of an agency's high Internet visibility on Congressional oversight was related by the authors to *principal-agent theory.* By reducing the costs of information-gathering by the principal because of the Internet, Mahler & Regan found that the control of the agent - the agencies and their outcomes - became easier and more effective. Within this framework, a much clearer distinction between *selectivity* and *transparency* could be drawn: since the degree of *transparency* is established in an "exogenous" manner, the issue of *selectivity* could be formulated as a "who is receiving what type of information" problem.

As Gray (1998: 11) notes: "The extent of secrecy would seem to vary across countries with lower levels of disclosure, including instances of secret reserves, evident in the Continental European countries, for example, compared to the U.S.A. and U.K.". Of course, such an observation does not directly address the issue of *selectivity*. But it could be argued that if this is completed with a relative preference for more rigid hierarchical structures in the continental countries and for more formal relationships with the companies' tiers, then it constitutes an evidence of a higher degree of *selectivity*. If this statement is true, our measure of *selectivity* should be associated with a greater *power distance* for these countries (and, to completely agree with the arguments exposed in Gray's quote, with a higher preference for *uncertainty avoidance* and a lower degree for *individualism*). Some comparative data are reported in Table 3.

Insert Table 3

Surprisingly, these data suggest that the continental European countries display a higher *power distance,* but a lower level of ***hierarchical selectivity*** comparative to the United States and United Kingdom cases. One possible explanation consists in the contradictory indication from the *power distance* and the "follows the rules" C061 question in the World Values Surveys' questionnaire which is used to compute our measure of *selectivity*. More exactly, this question is formulated as: "C061. - People have different ideas about following instructions at work. Some say that one should follow one's superior's instructions even when one does not fully agree with them. Others say that one should follow one's superior's instructions only when one is convinced that they are right. With which of these two opinions do you agree?" Or, the reported percentage in the 1999 survey for the "follow instructions without being convinced" answer against "must be convinced first" was 64.5% for United States, 43.5% for Great Britain and 46.8% for Northern Ireland, compared with 24.8% for Austria, 30.7% for Belgium, 34.6% for Germany or 33.3% for France. "Power Distance Index - PDI is the extent to which the less powerful members of organizations and institutions accept and expect that power is distributed

unequally. The PDI represents inequality (more versus less), but defined from below, not from above. It suggests that a society's level of inequality is endorsed by the followers as much as by the leaders"[vi]. Having a lower *power distance*, but a stronger belief in following the superior's instructions, doesn't seem, at least at an intuitive level, completely consistent; thus, we consider that an extensive study should be carried on this topic.

- ***Social subordination***

This value is a measure of the fitting in the *Corporate Social Responsibility* paradigm (CSR – also known as *corporate responsibility, corporate citizenship, responsible business* and *corporate social opportunity*) for the accounting norms, rules, procedures and for their operational application.

Under the impact of institutional development of the customer's network, the increased influence of the pro-environmental groups and the major shifting in socio-politic attitudes, a significant concern for most businesses may be attributable to the community's expectation, in developed countries, for organizations to engage socially beyond the boundaries of their commercial interests.

The *Corporate Social Responsibility Network* notes that CSR is "about how businesses align their values and behavior with the expectations and needs of stakeholders - not just customers and investors, but also employees, suppliers, communities, regulators, special interest groups and society as a whole. CSR describes a company's commitment to be accountable to its stakeholders"[vii]

In the broader context of the CSR, the *Social accounting* (SA- also known as *social and environmental accounting, corporate social reporting, corporate social responsibility reporting, non-financial reporting, sustainability accounting*) is the process of communicating the social and environmental effects of organizations' economic actions to particular interest groups within society and to society as a whole (Gray et al., 1987: IX). According to the Social Audit Network[viii] social accounting should be:

- Multi-perspective: encompassing the views of people and groups that are important to the organization.
- Comprehensive: inclusive of all activities of an organization.
- Comparative: able to be viewed in the light of other organizations and addressing the same issues within same organization over time.
- Regular: done on an ongoing basis at regular intervals.
- Verified: checked by people external to the organization.
- Disclosed: readily available to others inside and outside of the organization.

The development of the CSR / SA could be correlated with the degree of societal *femininity*: the societies with a higher concern for "protective" aspects of the social relationships are more likely to focus on the social and environmental impact of the companies activities that the more performance-oriented *masculine* ones. Also CSR / SA could be correlated with the *collectivism*

degree since societies with higher values of this variable are more interested in the social global impact of the companies' activity.

In practice, a number of reporting guidelines or standards have been developed to serve as frameworks for social accounting, auditing and reporting:

- *AccountAbility's AA1000 standard,* based on John Elkingron's triple bottom line (3BL) reporting[ix];
- *Accounting for Sustainability's Connected Reporting Framework;*
- *Global Reporting Initiative's Sustainability Reporting Guidelines;*
- *Verite's Monitoring Guidelines;*
- *Social Accountability International's SA8000 standard;*
- *Green Globe Certification / Standard;*
- *The ISO 14000 environmental management standard;*
- The United Nations Global Compact promotes companies' reporting in the format of a *Communication on Progress* (COP). A COP report describes the company's implementation of the Compact's ten universal principles;
- The United Nations' Intergovernmental Working Group of Experts on International Standards of Accounting and Reporting (ISAR) provides voluntary technical guidance on eco-efficiency indicators, corporate responsibility reporting and corporate governance disclosure;
- The FTSE Group publishes the FTSE4Good Index, an evaluation of CSR performance of companies;
- The Global Reporting Initiative (GRI) produces the world's de facto standard in *sustainability reporting guidelines*. Sustainability reporting is the action where an organization publicly communicates their economic, environmental, and social performance. The GRI's mission is to make sustainability reporting by all organizations as routinely and comparable as financial reporting. The GRI Guidelines are the most common framework used in the world for reporting. More than 1000 organizations from 60 countries use the Guidelines to produce their sustainability reports[x].

It is often argued that there is a contrasted approach in the field of CSR / SA between the United States and the European countries (including United Kingdom as a leading force in this topic). For instance, as William & Aguilera (2008:9) noticed that a study like Matten & Moon's (2004) "has compared CSR in Europe versus in the United States, and has proposed a conceptual framework of <explicit> versus <implicit> CSR, while recognizing that these are matters of emphasis, not wholly dichotomous states. They define explicit CSR as that seen in the United States, where companies volunteer to address important social and economic issues through their CSR policies, in significant part because of less stringent legal requirements than in Europe for such things as health care provision, employee's rights or environmental protection. In contrast, in Europe and the UK, responsibility for these issues is undertaken as part of a company's legal responsibilities, and thus CSR is <implicit> in the way the company does business". This argumentation seems to be supported by some empirical evidences as those revealed for instance by the FTSE4Good indexes series.

Insert Table 4

Our own measure of *social subordination* suggests that there are some important differences between United States and United Kingdom with closer values of ***social subordination*** to the continental European countries in the last case.

Insert Table 5

- ***Cautious approach***

"Conservatism or prudence in asset measurement and the reporting of profits is perceived as a fundamental attitude of accountants the world over" (Gray, 1988:10).
The key distinction in defining and measuring a risk is similar to the one between "risk" and "uncertainty". *"Risk" is the probability to obtain an unfavorable result of an economic decision*. *"Unfavorable" means that the result is "positive" but lower then the expected one or that the result is "negative"*. Therefore the risk concept incorporates both the situations of "unrealized" results and "losses". "Uncertainty" means that the observable result deviates (in a "positive" or "negative" sense) from the expected one. "Uncertainty" reflects both the situation of "unfavorable" results as well as that of "excess results".

Suppose, for instance, that the returns of a project are "normally" distributed around a certain "objective" or "subjective" target value. In such case, three main areas can be delimited: *Area 1* where the returns are positive but lower that the target value, that can be set based on the average of the previous values, the average of the sectors' returns, the "concurrencies average", the interest or inflation rate, the growth rate of the financial markets etc. or can be a pure subjective value; *Area 2* where the returns are negative and respectively *Area 3* where the returns are positive and higher that the target value. Area 1 and Area 2 form together the *risk zone*, while all three areas reflect the *uncertainty zone*. However, the relative importance of Area 1 and Area 2 for the risk definition is not the same: the agent will perceive a higher risk associated with losses that with values of returns, which are lower that the target but still positive. Thus, the cautious application of the accounting standards should at least: (1) estimate in a manner as larger as possible the "objective" and "subjective" material, financial and informational costs; (2) compute the incomes in a prudent evaluation based on "base/pessimistic" scenarios; (3) evaluate the market value of the company in the worst possible conditions; (4) treat adequately the values of the financial assets, the marketable and non-marketable assets and liabilities; (5) incorporate all the relevant aspects for the weighted / marginal capital cost estimation; (6) estimate the "fair values" of the receivables and payables.

In the conditions of exponential development of capital markets and intensive financial innovations many entities have switched *de facto* from "accrual accounting practices" (in which transactions are booked at historical costs plus or minus accruals) to an approach based on

"market-values". So that the accuracy and the capacity to reflect different types of operational risks of the accounting information becomes more and more critical for the relevance of the financial statements. The so-called *Managerial Risk Accounting* is concerned with the generation, dissemination and use of risk related accounting information to managers within organizations to enable them to judge and shape different risks.

A recent evolution is the field of risk / uncertainty prevention and management "was the increased importance of risk management and its integration into general management, which mainly results from laws and standards concerning internal control systems and requirements like the German <Gesetz zur Kontrolle und Transparenz im Unternehmensbereich> (KonTraG, Corporate Sector Supervision and Transparency Act), the US-American Sarbanes Oxley Act (SOA), or the revised international capital framework (Basel II). For example, the regulations of the KonTraG require the board of directors of German capital market oriented companies to <take measures to insure that developments that threaten the continued existence of the company are recognized early, especially to establish an internal controls system>. This passage is being interpreted as an obligation to establish working early warning and enterprise risk management systems in German corporations"(Nakada, 2005).

*The **cautious approach*** could be seen in a broader sense not only as the avoidance of "incomplete", non-relevant or obsolete financial information, but as the endorsement of accounting standards in such manner that this application is able to permit an adequate estimation of the "cost of risk". Of course, as Nakada (2005) notes: "But the <cost of risk> is the most complex for several reasons. First of all, thinking of risk as a cost is somewhat abstract. While most people understand that risk is something to be controlled, or even minimized, it's not natural to think of it as a cost. Second, risk is not represented in GAAP accounting. There are no entries in the income statement for <cost of risk> and nothing in the balance sheet that represents <stock of risk>. Lacking either intuition or accounting principles, it is no wonder that the cost of risk is left behind". Still, the pressure of financial instability, the negative consequences of "window dressing" for the book values, the rapid changes in the market evaluations for assets and liabilities should lead to the development of new accounting techniques and methods for risk management.

It is trivial to say that *cautious* is consistent with *uncertainty avoidance*: a prudent treatment of accounting information is consistent with a concern to cope with the uncertainty about current and future market values of patrimonial and incomes / expenditures elements. At the same time, it could be argued that there is also a correlation with a degree of *conformism*: a failure in the uniform application of the standards has the potential to create uncertainty in the payoffs for the company and its partners (lenders, shareholders, managers, suppliers and customers).

The situation varies in different countries, according to the differences in the rigidity of their compliance with the historical cost principle. This leads to various degrees of *conservatism* in Gray's sense in market and book values measures across countries. The data in Table 6 suggest

that the connection between the *uncertainty avoidance* and our measure of *cautious* is less clear. For instance, in the United Kingdom and Ireland a lower level of the first variable may correspond to a higher degree of *cautious* than in certain European continental countries (since the World Values Surveys' data are not complete for the 1999-2000 survey, we could not compute this variable for the United States case).

Insert Table 6

Cautious approach is not only an expression of "risk aversion" but rather a "rational" choice in standards' implementation: in a context of increasing complexity of business environment, it is vital for decision makers to benefit from accurate non-distortional information and to formulate their judgment by evaluating as accurate as possible the different intrinsic and extrinsic risks associated with their decisions.

If the accounting values are understood as a "sub-product" of the cultural values, then the changes in their contents take place under the impact of the societal and paradigmatic shifts. Factors like global competition / real and financial globalization, the new production and technologic structures typical for the post industrial society, the mutations in national and international power relationships, the development of the environmental conscience and the new configurations of the socio-demographic variables act towards modifying all the characteristics of the accounting values and the way in which the accounting standards are conceived and transposed in practice.

Resuming, Figure 1 includes the accounting values and their determinants.

Insert Figure 1

In connection to this set of accounting values a ***series of observations*** must be made:

- These do not reflect the framework, institutions and implementation mechanisms of accounting norms, regulations, procedures which are considered as given in an exogenous manner. Thus, in the situation of applying those in different institutional architectures, it is possible to notice only the *ex post* consequences of the way the economic systems work and not of the determinants of their configuration;
- *By definition* to every accounting value is assigned a *transitional value*. However, it is not clear enough if a change in the transitional values leads automatically to a reconfiguration of the accounting values;
- Formally, the operationalization of these accounting values' estimation requires the adoption of a "translation strategy": namely a mechanism through which to a certain level of the transitional values corresponds a certain level of accounting values. The simplest modality of achieving such a mechanism consists in an attribution at the scale „1/1": so, for adopting a ranking procedure of transitional values' specific levels in a set of observations, for the highest value of the correspondent transitional value, the accounting value receives

the rank "1" and respectively for the lowest value of this, the accounting value receives the rank "0". An alternative consists in adopting a normalization procedure of the transitional values and, based on that, building the estimators of the accounting values as "fuzzy" variables. But any of these procedures will imply that the results will be sensitive to the selection of the observation data set. In other words, these could vary according to the changes in the set's structure, so that the accounting values should be seen as "ranks" ("relative levels") and not as "absolute levels". A country will have higher or lower values for a particular accounting variable in respect only with the other countries included in the observational set. Of course, at limit, this issue could be, at least hypothetically, addressed by taking into account a "complete" set of observations. Still, this will not change the fact that the interpretation of any value attributed to an accounting variable should be done only in an comparative sense;

- Without a description of cultural paradigms, it is difficult to assess the degree of *informational discrepancy* of these accounting values. If it is admitted, for example, that the description of these paradigms is subordinated to World Values Surveys, it remains to be tested the way in which the level of the accounting values varies according to the differences highlighted by the "ensemble" of the elements revealed by the survey;
- In comparison with Gray's model, there is a focus shift towards the functional aspects specific to the financial reporting systems. However, the definition of the proposed accounting values still maintains references to the institutional characteristics - obvious mainly in the case of the first three values, as well as for the last of the variables. We insist on the fact that in making these values operational, the estimation methods must focus above all on the way in which accounting norms and regulations are applied and less on the formal stipulations of these, on the role of individual professional judgment and degree of flexibility accepted in their implementation;
- By the functional definition manner, the accounting values do not permit an immediate estimation of informational efficiency. To increase this possibility, it is necessary to additionally consider the following: a) to complete with a definition of this type of efficiency in comparison with the normative aspects that lay at the base of the financial reporting systems and respectively b) to formulate a testing methodology of the existing connections between the modifications happened at the level of the accounting variables and of the proxy variable for *informational efficiency*;

Beyond these observations, there are two fundamental questions still looking for an answer: *How deep is the de facto difference between our proposed model and Gray's model?* and *How important is the gnoseological contribution of this model?*

An easier construction method of accounting variables is represented by the normalization procedures' choice of intermediary variables. The implicit idea is that a ranking procedure of these variables is able to reveal the specific relative differences which appear in the way financial reporting systems work and explain non homogenous implementation of some given

norms, regulations and procedures in an exogenous manner. For example, ***it is possible to estimate the level of the accounting variables accounting according to the following procedure*:**

$$X^{a}_{sj} = \frac{X^{i}_{sj} - \min_{k=1..s}\left\{X^{i}_{kj}\right\}}{\max_{k=1..s}\left\{X^{i}_{kj}\right\} - \min_{k=1..s}\left\{X^{i}_{kj}\right\}} \quad (14)$$

where X^a is the level of the accounting variable j from the set s of such variables built based on the intermediary variable X^i and:

$\min_{k=1..s}\left\{X^{i}_{kj}\right\}$, $\max_{k=1..s}\left\{X^{i}_{kj}\right\}$ are the minimum/maximum levels of this set's components.

This formula can be applied if the intermediary variables are supposed to be **directly** connected with the accounting variables. If *per a contrario* the connection is seen as a **inverse** one, then the accounting variable should be computed as:

$$X^{a}_{sj} = \frac{\max_{k=1..s}\left\{X^{i}_{kj}\right\} - X^{i}_{sj}}{\max_{k=1..s}\left\{X^{i}_{kj}\right\} - \min_{k=1..s}\left\{X^{i}_{kj}\right\}} \quad (15)$$

Considering the way in which the intermediary variables are defined, relation (14) stands for ***functional conformism*** and ***functional transparency***; while relation (15) is used to compute the ***hierarchical selectivity, social subordination*** and ***cautious approach***.

In conclusion to this paragraph, we consider that the main differences to Gray's approach consist not only in "different labels / different contents" but mainly in the construction of these variables based on the World Value Surveys' components - which are significantly less "Western-centered" than Hofstede's and more able to capture the "true" universal cultural dimensions. Of course, this is debatable since IAS/IFRSs and, respectively, US GAAP have their roots in the "Anglo-Saxon" perspective and both are currently subject to an on-going convergence process. Still, the importance of having a set of "framework-independent" cultural and accounting variables consists in an increased capacity of testing how could these be implemented in "non Anglo-Saxon" (and "non-Western") cultures.

3. AN EMPIRICAL ANALYSIS: A SAMPLE OF CEE COUNTRIES

In order to include an empirical study case, our paper includes an application of this procedure that leads at the estimation of the determinants of the current status of IFRSs implementation, specific to accounting values in a sample of Central and Eastern European countries.

Selecting the sample countries

The role of this section is to provide an empirical explanation on how culture interferes with individual countries' decision to permit/require/prohibit IFRSs' use for the individual financial statements of the domestic unlisted entities.

The first step in our empirical analysis consisted in determining the sample countries. Since we have considered the EU membership status as a guarantee of the implementation of the *acquis communitaire,* the sample countries were selected amongst the CEE countries, as defined by the OECD[xi], and simultaneously fulfilling the criteria:

- These are all CEE countries and share common socio-economic historical background;
- Each of these countries has national cultural specificity;
- These are all, at the present time, EU Member States;
- There are enough available data for constructing the cultural variables based on World Values Survey's questions.

Thus, from the fifteen CEE countries, only nine fulfill the entire set of criteria, as presented in Table 7:

Insert Table 7

There are some issues we would like do address in order to provide a more meaningful explanation of our further presented statistical results. Thus, the first issue that we consider relevant in our analysis is that the evolution of accounting regulations in the sample CEE countries had suffered external influences determined by other national financial reporting systems. There can be noticed several external influences, such as:

- Austrian and German commercial code influenced the accounting regulations in Czech Republic, Hungary and Poland;
- A French influence is obvious in Romania's case;
- A dual French and German influence is detected in Slovakia's case (PWC, 2004);
- Latvian accounting was strongly influenced by Danish regulations that meet in general the EU's Directives;
- Lithuanian accounting regulations makes reference to IAS version before 2001.

The fact is that all the sample countries have elaborated in the early '90 national laws on accounting and auditing separated by the company law. Most of these regulations have been subject of a series of modifications in order to align them to the political, social and economic objectives of each country. In the majority of the states the essential changes intervened in 2004 - 2005 as a reflection of the IAS Regulation adopted by the European Union and were performed by the state through its main representative, the Ministry of Finance.
Actually, nowadays, the *Ministry of Finance* may take several positions such as (Bogdan & Cristea, 2008):

- to continue to establish the domestic accounting regulations (like in Romania);
- to decide to issue domestic accounting standards. For example, Czech Accounting Standards are prepared and published by the Ministry. In this case, the role of the National Accounting Board is to comment on exposure drafts, provide interpretations and lobby the relevant parties;

° to delegate some if its responsibilities including that of issuing accounting standards to independent bodies. For example, Hungarian Accounting Standards Board has recently been established to take over the responsibility for setting Hungarian Accounting Standards from the Ministry of Finance. The Board was established by Government Decree 202/2003 under the authority of the Accounting Act.

Many of the countries in our sample have established an apparently independent body to issue domestic accounting standards (Czech Republic, Estonia, Hungary, Poland, Latvia and Lithuania). However, the extent of the *accounting profession* in the elaboration process is not quantifiable and some organizations (official website of The Federation of International Trade Associations) support the idea that in some countries such as Bulgaria, Czech Republic, Hungary, Poland and Romania the "accountants associations have some difficulties to get organized, because of the importance of the State in the accounting system"[xii].

All these issues reflect the national diversity within the sample countries as well as a possible qualitative explanation of our cultural variables such as *social hierarchy significance*, *freedom of initiative* and *social justice significance*.

Hypotheses and statistical results

The next step was that, based on the cultural variables established in the previous section and on our previous theoretical considerations to test certain hypotheses in regard to the connections between the accounting variables and the option to use IFRSs in the individual financial statements of the unlisted entities from the sample countries. These hypotheses could be summarized as follows:

H1: *A higher level of* ***functional conformism*** *is susceptible to stimulate the adoption of IFRS;*

H2: *A* ***functional transparency*** *is sustained by an "exogenous" implementation of IFRSs;*

H3: *A more pronounced preference for the* ***hierarchical selectivity*** *is translated in a higher preference for IFRSs' adoption;*

H4: *A superior social justice orientation reflected by a higher* ***social subordination*** *will lead to a greater preference for IFRSs;*

H5: *A* ***cautious approach*** *as a rational reaction in the face of markets instability will encourage the endorsement of uniform standards.*

For testing these hypotheses, the <u>*methodology*</u> implies:

1. The construction of a fuzzy score variable able to capture the "permitted / required" IFRS adoption of the domestic unlisted companies. A possible codification system for the construction of this variable is presented in the Annex.

Insert Table 8

This variable takes values in a scale between:

- "0" - meaning that the use of IFRSs is prohibited and
- "2" - reflecting the situation of IFRSs' requirement;

2. The running of a *pool data* regression between the score variable as endogenous and the accounting variables as exogenous ones:

$$score_i = X'_i\beta + \gamma_i + \varepsilon_i \quad (16)$$

where $X^{'}$ represent the cultural variables, γ_i signify the cross-section effects and ε_i are the error terms.

The data set with the specific values for the score variable and the cultural ones is presented in the Annex.

Insert Table 9

The main statistics for the stacked cultural data are displayed in the Annex.

Insert Table 10

The accounting values are reported in Table 11 and their general statistic properties are displayed in Table 12.

Insert Table 11
Insert Table 12

It can be noticed that these data are covering a quite wide spectrum of values and, as a consequence, these are describing different situations on the level of IFRSs' adoption. The discriminant analysis, along with the scatter plots, suggests that there are some significant differences between the components of the analyzed sample due to the non-uniform regulatory policies.

Insert Table 13
Insert Graphic 2

In this context, by applying the above mentioned methodology to the sample countries, we have obtained the results displayed in the Annex.

Insert Table 14

According to these results, we can draw ***several conclusions***:

- ✓ *All the H1 – H5* hypotheses are confirmed with different degrees of statistical significance;
- ✓ According to these results, it can be observed that the accounting values with the highest explanatory contribution are represented by ***hierarchic selectivity, social subordination***

and ***functional transparency***, while the least explanatory contribution is ***functional conformism***;

- ✓ There can be noticed some <u>*important differences between the countries in the sample*</u>:

a. More exactly, one could distinguish, at one extreme, a sub-group 1 composed by ***Poland***, and the ***Baltic countries*** (especially Latvia and Estonia) - with greater work significance, a higher freedom of individual initiative, a medium level of social hierarchy significance and a relative important focus on social justice; and consequently with higher degree of *conformism*, *transparency* (with the significant exception of Poland) and *selectivity*, a lower *social subordination* and a greater *cautious approach* in IFRSs' implementation.

For example, Poland – the country with the most developed financial market in the region, Warsaw Stock Exchange (SE), succeeds in having an almost sixteen times Bulgarian SE's market capitalization - is more focused on permitting IFRSs in the individual financial statements of companies that have applied for stock exchange listing or whose parent uses IFRSs; by prohibiting the use of IFRSs in the separate financial statements of rest of unlisted companies. Similar to the other countries entering sub-group 1, Poland has established an independent body to issue domestic accounting standards: the Polish Accounting Standards Committee set in 2002 issued until January 1, 2007 three standards and two standpoints (on accounting for emission rights and on conversion costs for balance sheet valuation).
Alternatively, Latvia has created Latvian Accounting Board which adopted domestic accounting standards in 1999. Nowadays, there are eight standards in force and all the standards have an international corresponding standard. The unlisted entities, except the unlisted financial institutions, are not permitted to use IFRSs and formats of main financial statements are prescribed by the law.
Thus, Poland and Latvia, by showing more freedom of initiative and a medium level of social hierarchy significance, *intend to create domestic sets of standards for the unlisted entities*.

b. At the other extreme, a sub-group 2 - formed by ***Bulgaria*** and ***Slovakia*** with medium work significance, lower freedom of individual initiative, greater significance of well-defined social hierarchies and medium focus on social justice; and with a lower *conformism* (more evident in Bulgaria's case), a medium level of *transparency* (with very close value for our measure), a lower level of *selectivity*, a lower/ medium level of *social subordination* and *cautious approach*.

For instance, Bulgaria requires the use of IFRSs for the unlisted financial institutions and all large unlisted limited liability entities, while other unlisted entities are permitted to use IFRSs. The lower freedom of initiative and the greater social hierarchy significance is proven by the fact that the accountants association (Institute of Certified Public Accountants of Bulgaria – ICPAB) *has some difficulties in getting organized and less opportunities in creating an independent standard setter*.

4. FINAL CONCLUSIONS

The results presented in the previous section reveal that on a "median" level the accounting variables and the characteristics of the regulatory set for the IFRSs' adoption are significantly linked. More generally, the proposed analysis is affected by some important limitations both on the theoretical as well as on the empirical level. Among these limitations, one could note:

Theoretical "white spots"

- How could be "culture" measured?
  The appeal to the Hofstede's cultural variables could be criticized due to the fact that these have obviously a certain self-referential in the "occidental" culture and are not able to sustain a more accurate distinction between the characteristics of the cultural artifacts. But isn't the same situation for the *World Values Surveys* variables? In our opinion, the fact that the questions are based on a "valorization approach" for some universal human values, addresses at least partially this issue.
- What is specific for the national differences in the **IFRSs** adoption?
  There are quite few details about the intrinsic mechanisms of adopting / supervising / punishing the non-followers of the regulations for **IFRSs** and is not very clearly if in fact all the required conditions implied by the global decisional framework are fulfilled in this particular case and, even more, the decisional particularities are not sufficiently highlighted.
- How feasable is the construction of the accounting variables?
  The fact that the "translation strategy", which converts the cultural variable in the "accounting" ones, generates different values as the data set is changed arises an intriguing question on the inter-sets comparison. *Does this strategy really generate proper values for the "accounting" variables?* The argument that, inside a given set of observations, these values appear as "relative" ones and should be interpreted as "ranks", does not diminish the fact that in a certain sense these are *ad hoc* constructions and there is in fact no clear description of the "translation mechanisms".
- What is specific for Central and Eastern European countries?
  It may be observed that there are relative few details about the institutional regulatory frameworks and mechanisms of the CEE countries and even less about the linkages between the proposed set of variables and the specific accounting systems' architecture.

Empirical estimation problems

Thus, in the present paper may be detected some empirical estimation problems connected with:

- The stability of the regression models and the quality of the results (for instance, in terms of properties of the residual variables);
- The identification problems for the involved parameters;
- The possible existence of non-linear interactions between the variables and the effects of such interactions;

- The insufficient number of observations and the absence of an explanation for the composition of the sample;
- The fact that the *pool* data are not constructed based on individual time-series so that there is no possibility for cross-section analysis, etc.

Since the above mentioned limitations leave unsolved a series of issues generated by the proposed analysis, we consider that a further development of this research is required, mainly on the following directions:

a) To explain some possible translation mechanisms of the cultural values in accounting values, by clarifying the relations between the global paradigm and the specific accounting "sub-culture";
b) To emphasize the impact of institutional harmonization has on the functional aspects of the accounting values;
c) To outline an unified framework able to reflect the structural and functional aspects of accounting values' determinants and changes.

Therefore, despite all these *caveats*, we argue that the paper can be seen as a small breakdown into the usual manner to deal with cultural and accounting variables, related consequences in general and with the **IFRSs** topic in particular. The human species is not motivated in its fight for control over the natural and artificial environment only by "rational" motifs. Instead, the emotions could balance the logic and fear, solidarity, empathy and hope twins, shaping the way in which people do business and live together in the same social realm.

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ANNEX

Table 1: **The *World Values Survey* questions**

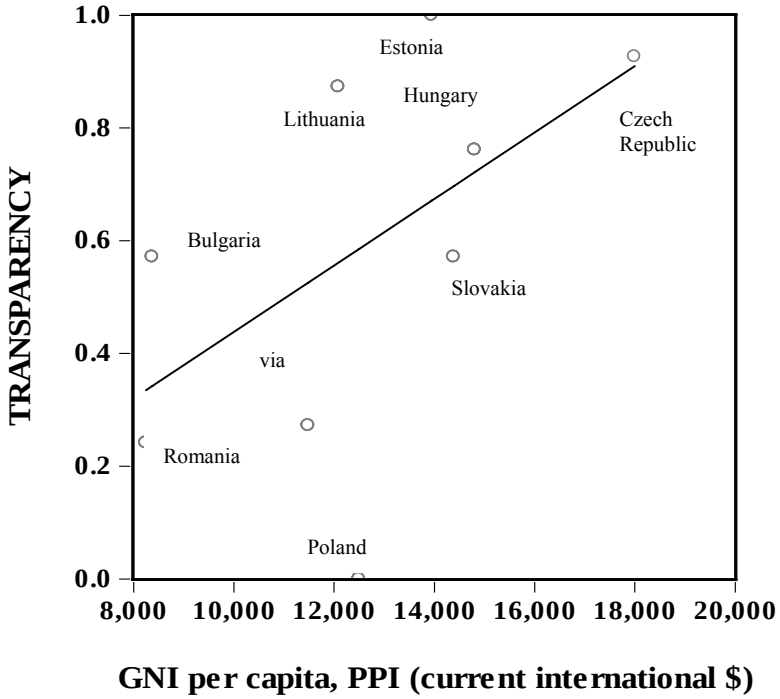
Code of Question	FORMULATION	DATA REPRESENTS
A005	Please say, for each of the following, how important it is in your life- *Work*	Very important
A173	Some people feel they have completely free choice and control over their lives, while other people feel that what they do has no real effect on what happens to them. Please use this scale where 1 means "none at all" and 10 means "a great deal" to indicate how much freedom of choice and control you feel you have over the way your life turns out.	None at all
C013	Here are some more aspects of a job that people say are important. Please look at them and tell me which ones you personally think are important in a job - Good job security.	Not mentioned
C016	Here are some more aspects of a job that people say are important. Please look at them and tell me which ones you personally think are important in a job?-*An opportunity to use initiative*	Not mentioned
C034	How free are you to make decisions in your job?	None at all
C061	People have different ideas about following instructions at work. Some say that one should follow one's superior's instructions even when one does not fully agree with them. Others say that one should follow one's superior's instructions only when one is convinced that they are right. With which of these two opinions do you agree?	Follow instructions
E163	Would you be prepared to actually do something to improve the conditions of Your immediate family?	Absolutely yes
F114	Tell me for each of the following statements whether you think it can always be justified, never be justified, or something in between, using this card. *Claiming government benefits to which you are not entitled*	Never justifiable
F116	Tell me for each of the following statements whether you think it can always be justified, never be justified, or something in between, using this card. *Cheating on taxes if you have a chance*	Never justifiable
F145	According to you, how many of your compatriots do the following?- *Claiming state benefits to which they are*	Almost all
F146	According to you, how many of your compatriots do the following?- *Cheating on tax if they have the chance*	Almost all

Source: http://www.worldvaluessurvey.org/; 2008

Table 2: **The ranks for "degree of transparency"**

	"TRANSPARENCY"	**"OPACITY"**	**RANK BASED ON " TRANSPARENCY"**	**RANK BASED ON "OPACITY INDEX"**
ARGENTINA	0.27	45	27	30
AUSTRIA	0.40	25	24	7
BELGIUM	0.46	27	22	11
BRAZIL	0.12	40	33	21
CANADA	0.65	24	9	6
CHILE	0.25	32	28	14
CHINA	0.72	48	6	34
COLOMBIA	0.22	42	30	24
CZECH REPUBLIC	0.63	41	11	23
DENMARK	0.97	22	2	4
FINLAND	0.66	17	8	2
FRANCE	0.34	39	25	19
GREECE	0.51	40	18	21
HUNGARY	0.55	38	15	17
INDIA	0.22	44	29	28
INDONESIA	0.06	56	37	37
IRELAND	0.68	25	7	7
ITALY	0.47	44	20	28
JAPAN	0.77	26	4	10
REPUBLIC OF KOREA	0.45	38	23	17
MEXICO	0.09	43	34	25
NETHERLANDS	0.74	23	5	5
NIGERIA	0.06	60	36	38
PAKISTAN	0.49	45	19	30
PHILLIPINES	0.00	50	38	35
POLAND	0.21	43	31	25
PORTUGAL	0.53	39	17	19
RUSSIAN FEDERATION	0.53	45	16	30
SAUDI ARABI	0.46	52	21	36
SINGAPORE	0.64	28	10	13
SOUTH AFRICA	0.18	32	32	14
SPAIN	0.58	36	14	16
SWEDEN	0.61	25	13	7
TURKEY	0.07	43	35	25
EGYPT	0.30	47	26	33
GREAT BRITAIN	1.00	14	1	1
UNITED STATES	0.62	21	12	3
GERMANY	0.94	27	3	11

Graphic 1: **The scatterplots for *transparency* and GNI per capita**



Note: For GNI data the source is: The World Bank Group (2008) (http://web.worldbank.org/WBSITE/EXTERNAL/DATASTATISTICS). The data represents non-weighted averages for 2000-2007

Table 3: **Hofstede's cultural variables and *Hierarchical selectivity***

Country	**Power Distance Index**	**Individualism**	**Uncertainty Avoidance Index**	***Hierarchical selectivity***
Austria	11	55	70	0.0000
Belgium	65	75	94	0.2233
Czech Republic	57	58	74	0.2061
Denmark	18	74	23	0.3454
Finland	33	63	59	0.1992
France	68	71	86	0.3083
Germany	35	67	65	0.3484
Greece	60	35	112	0.0654
Hungary	46	55	82	0.5487
Italy	50	76	75	0.0614
Netherlands	38	80	53	0.1081
Norway	31	69	50	0.9191
Poland	68	60	93	0.0042
Portugal	63	27	104	0.5537
Spain	57	51	86	0.5105
Sweden	31	71	29	0.4354
Averages for continental European countries	*45.69*	*61.69*	*72.19*	*0.30*
United Kingdom	*35*	*89*	*35*	*0.5879*
United States	*40*	*91*	*46*	*1.0000*
Ireland	*28*	*70*	*35*	*0.6644*

Note: The Hofstede cultural variables values are from: http://www.clearlycultural.com/geert-hofstede-cultural-dimensions/, (2008)

Table 4: **The FTE4Good Index Series (Data as at: 31/10/2008 FTSE4Good Index Series Values)**

Index name	Index value (LOC)	TRI (LOC)	% Change on day	% Change on quarter
FTSE4Good Europe Benchmark Index	3049.74	3824.25	2.67	-19.73
FTSE4Good Europe 50 Index	2775.51	3516.07	3.02	-17.22
FTSE4Good UK Benchmark Index	3699.29	4754.62	1.7	-17.44
FTSE4Good UK 50 Index	3742.16	4844.07	1.73	-17.06
FTSE4Good US Benchmark Index	3561.33	4052.31	1.38	-21.4
FTSE4Good US 100 Index	3429.64	3917.28	1.31	-21.09
FTSE4Good Global Benchmark Index	4103.58	4866.42	0.19	-29.54
FTSE4Good Global 100 Index	3636.43	4348.31	0.48	-27.32

Source: FTSE Company (2008) - http://www.ftse.com/objects/csv_to_table.jsp?infoCode=NGF4G&theseFilters=&csvAll=&theseColumns=MCwxLDIsMyw0&theseTitles=&tableTitle=FTSE4Good%20Index%20Series%20Values&dl=&p_encoded=1

Table 5: **Hofstede's cultural variables and *Social subordination***

Country	Masculinity	Individualism	Social subordination
Austria	79	55	0.1728
Belgium	54	75	0.1349
Czech Republic	57	58	0.1795
Denmark	16	74	0.3067
Finland	26	63	0.1962
France	43	71	0.1366
Germany	66	67	0.1781
Greece	57	35	0.0138
Hungary	88	55	0.0000
Italy	70	76	0.0837
Netherlands	14	80	0.2265
Norway	8	69	0.9937
Poland	64	60	0.1547
Portugal	31	27	0.1184
Spain	42	51	0.9961
Sweden	5	71	0.2134
Averages for continental European countries	*45.00*	*61.69*	*0.26*
United Kingdom	*66*	*89*	*0.2041*
United States	*62*	*91*	*1.0000*
Ireland	*68*	*70*	*0.1599*

Table 6: ***Uncertainty avoidance*** **and** ***Cautious approach***

Country	Uncertainty avoidance	Cautious approach
Austria	70	0.5718

Belgium	94	0.1983
Czech Republic	74	0.0361
Denmark	23	0.0695
Finland	59	0.2360
France	86	0.1891
Germany	65	0.6735
Greece	112	0.4182
Hungary	82	1.0000
Italy	75	0.3539
Netherlands	53	0.0000
Poland	93	0.6037
Portugal	104	0.3896
Sweden	29	0.2257
Averages for continental European countries	*72.7857*	*0.3547*
United Kingdom	*35*	*0.2682*
Ireland	*35*	*0.4101*

Figure 1: **Accounting values and their determinants**

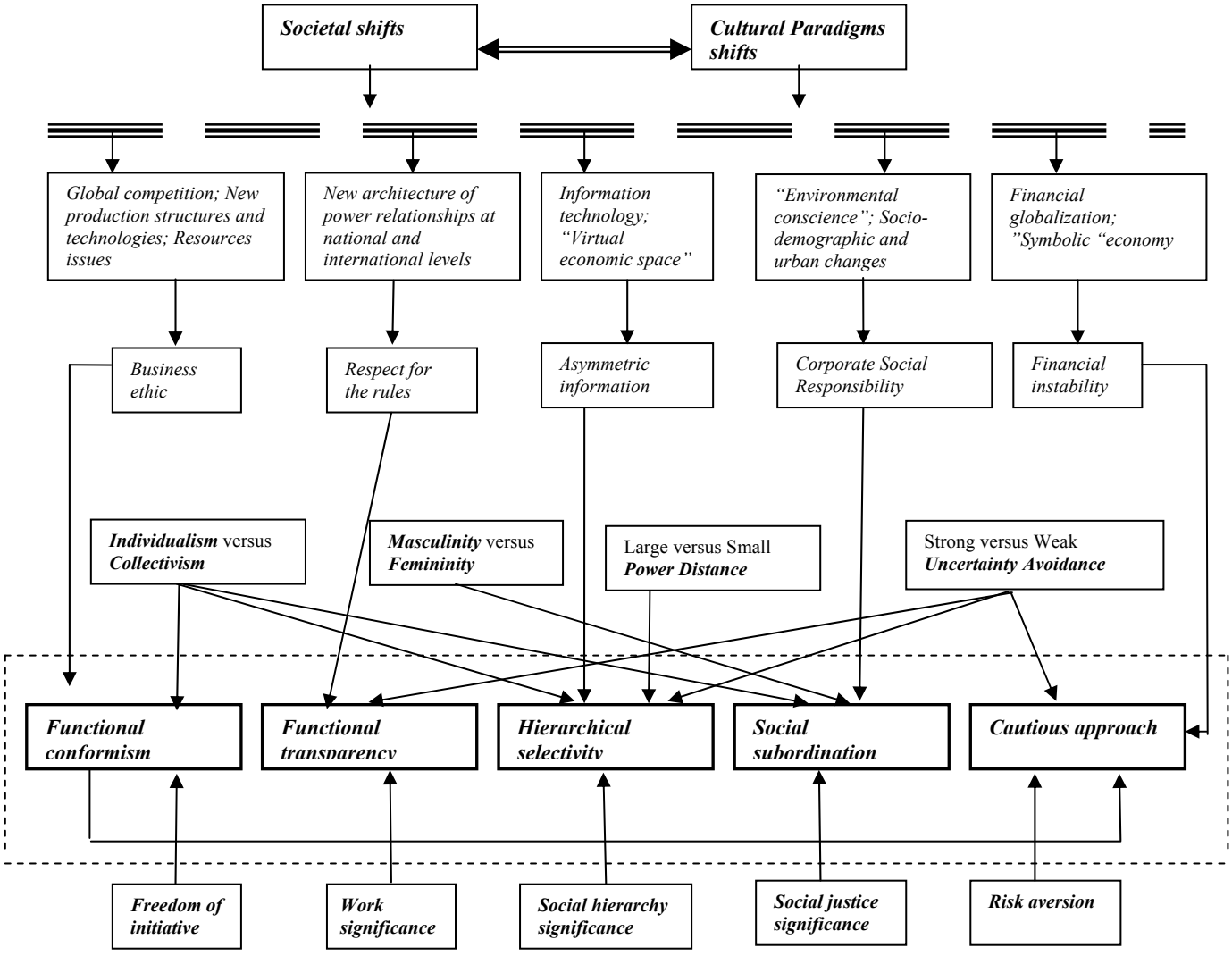


Table 7: **The countries' cross section identifiers set**

Bulgaria	Hungary	Poland
Czech Republic	Latvia	Romania
Estonia	Lithuania	Slovakia

Table 8: **The codification system for the domestic unlisted companies- the use of IFRSs (**Individual financial statements - IFS)

WEIGHT	**TYPE of entity**	**THE IFRSS ARE:**		
0.5	Financial institution	Required=2	Permitted=1	Not permitted / Not mentioned =0
0.3	Large	Required=2	Permitted=1	Not permitted / Not mentioned =0
0.2	Small and medium	Required=2	Permitted=1	Not permitted / Not mentioned =0

Source: inspired by Use of IFRS by Jurisdiction updated at 17 June 2008, http://www.iasplus.com/country/useias.htm

Table 9: **The data set- cultural variables**

COUNTRY	**SCORE**	**NOT FREEDOM**	**NOT WORK**	**NOT HIERARCHY**	**NOT JUSTICE**	**NOT RISK**
Bulgaria	1.8	1.847	0.486	1.027	-1.259	-0.715
Czech Republic	0	2.497	0.635	1.187	-1.220	-0.042
Estonia	1.5	2.327	0.666	1.556	-1.030	-0.132
Hungary	1	2.031	0.566	0.844	0.033	-1.038
Latvia	1	1.576	0.361	1.321	-1.577	0.007
Lithuania	1	1.558	0.612	1.650	-1.265	-0.348
Poland	0	2.073	0.247	1.366	-1.051	-0.628
Romania	0	2.034	0.348	1.061	-0.793	-0.407
Slovakia	2	2.182	0.486	1.091	-0.919	-0.507

Table 10: **The variables' statistics for the stacked data- cultural variables**

	SCORE	**NOT FREEDOM**	**NOT WORK**	**NOT HIERARCHY**	**NOT JUSTICE**	**NOT RISK**
Mean	0.922222	2.013885	0.489677	1.233750	-1.009052	-0.423319
Median	1.000000	2.034202	0.486133	1.187444	-1.051448	-0.407334
Maximum	2.000000	2.497453	0.665532	1.650260	0.032814	0.007311
Minimum	0.000000	1.557805	0.247180	0.843970	-1.576511	-1.037503
Std. Dev.	0.777460	0.314597	0.145038	0.262046	0.452359	0.341500
Skewness	-0.065023	-0.146807	-0.366632	0.239426	1.313631	-0.351029
Kurtosis	1.626039	2.093450	1.841671	2.011332	4.347074	2.213706
Jarque-Bera	0.714256	0.340515	0.704776	0.452537	3.268917	0.416679
Probability	0.699683	0.843447	0.703007	0.797504	0.195058	0.811932
Sum	8.300000	18.12496	4.407089	11.10375	-9.081465	-3.809875
Sum Sq. Dev.	4.835556	0.791772	0.168289	0.549345	1.637026	0.932977
Cross sections	9	9	9	9	9	9

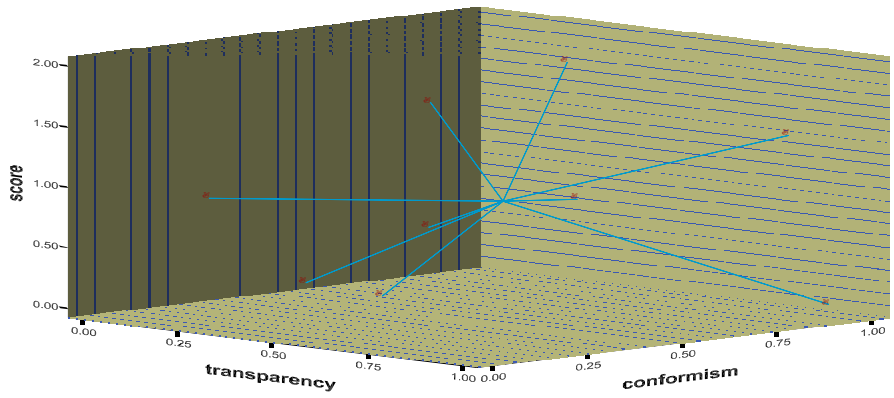
Table 11: **The data set- accounting variables**

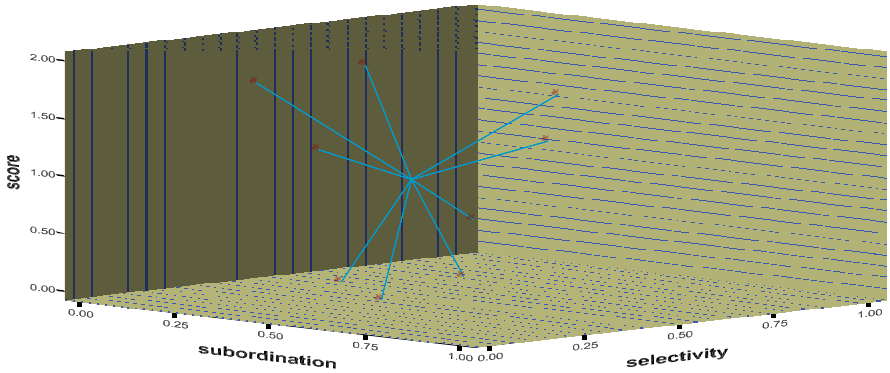
COUNTRY	SCORE	*Functional conformism*	*Functional transparency*	*Hierarchical selectivity*	*Social subordination*	*Cautious approach*
Bulgaria	1.8	0.307346627	0.57117678	0.227278348	0.197403047	0.308367333
Czech Republic	0	1	0.926727374	0.425992511	0.221609762	0.952699462
Estonia	1.5	0.818952646	1	0.882966699	0.339404917	0.866400592
Hungary	1	0.503465804	0.761210223	0	1	0
Latvia	1	0.019783055	0.271995283	0.591023883	0	1
Lithuania	1	0	0.873210238	1	0.193362491	0.660349337
Poland	0	0.547929025	0	0.648056865	0.32626312	0.391481414
Romania	0	0.506995195	0.241327734	0.269563653	0.486825905	0.603139661
Slovakia	2	0.663888867	0.57117678	0.305937192	0.408595173	0.508123454

Table 12: **The variables' statistics for the stacked data- accounting variables**

	SCORE	*Functional conformism*	*Functional transparency*	*Hierarchic selectivity*	*Social subordination*	*Cautious approach*
Mean	0.922222	0.485373	0.579647	0.483424	0.352607	0.587840
Median	1.000000	0.506995	0.571177	0.425993	0.326263	0.603140
Maximum	2.000000	1.000000	1.000000	1.000000	1.000000	1.000000
Minimum	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000
Std. Dev.	0.777460	0.334803	0.346690	0.325002	0.281086	0.326852
Skewness	-0.065023	-0.146807	-0.366632	0.239426	1.313631	-0.351029
Kurtosis	1.626039	2.093450	1.841671	2.011332	4.347074	2.213706
Jarque-Bera	0.714256	0.340515	0.704776	0.452537	3.268917	0.416679
Probability	0.699683	0.843447	0.703007	0.797504	0.195058	0.811932
Sum	8.300000	4.368361	5.216824	4.350819	3.173464	5.290561
Sum Sq. Dev.	4.835556	0.896747	0.961550	0.845012	0.632074	0.854658
Cross sections	9	9	9	9	9	

Graphic 2 : **The scatterplots for accounting variable**





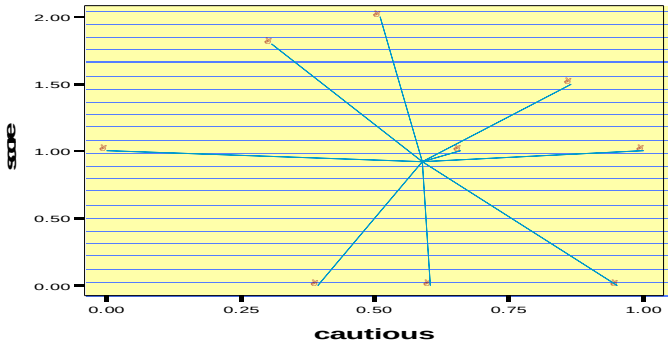


Table 13: **The discriminant analysis- *score* / accounting variables variables**

Group Statistics

score		Mean	Std. Deviation	Valid N (listwise)	
				Unweighted	Weighted
.00	conformism	.6850	.27359	3	3.000
	transparency	.3894	.48077	3	3.000
	selectivity	.4479	.19019	3	3.000
	subordination	.3449	.13359	3	3.000
	cautious	.6491	.28342	3	3.000
1.00	conformism	.3299	.34453	5	5.000
	transparency	.6955	.28436	5	5.000
	selectivity	.5403	.42462	5	5.000
	subordination	.3460	.38499	5	5.000
	cautious	.5670	.41056	5	5.000
2.00	conformism	.6639	. [a]	1	1.000
	transparency	.5712	. [a]	1	1.000
	selectivity	.3059	. [a]	1	1.000
	subordination	.4086	. [a]	1	1.000
	cautious	.5081	. [a]	1	1.000
Total	conformism	.4854	.33480	9	9.000
	transparency	.5796	.34669	9	9.000
	selectivity	.4834	.32500	9	9.000
	subordination	.3526	.28109	9	9.000
	cautious	.5878	.32685	9	9.000

a. Insufficient data

Tests of Equality of Group Means

	Wilks' Lambda	F	df1	df2	Sig.
conformism	.696	1.308	2	6	.338
transparency	.817	.671	2	6	.546
selectivity	.939	.194	2	6	.828
subordination	.994	.017	2	6	.983
cautious	.977	.071	2	6	.932

Pooled Within-Groups Matrices [a]

		conformism	transparency	selectivity	subordination	cautious
Covariance	conformism	.104	.081	-.015	.035	.005
	transparency	.081	.131	.017	.016	.032
	selectivity	-.015	.017	.132	-.071	.084
	subordination	.035	.016	-.071	.105	-.090
	cautious	.005	.032	.084	-.090	.139
Correlation	conformism	1.000	.692	-.127	.335	.039
	transparency	.692	1.000	.133	.141	.234
	selectivity	-.127	.133	1.000	-.599	.620
	subordination	.335	.141	-.599	1.000	-.742
	cautious	.039	.234	.620	-.742	1.000

a. The covariance matrix has 6 degrees of freedom.

Covariance Matrices [a,b]

score		conformism	transparency	selectivity	subordination	cautious
.00	conformism	.075	.124	-.001	-.031	.070
	transparency	.124	.231	-.032	-.040	.135
	selectivity	-.001	-.032	.036	-.013	-.025
	subordination	-.031	-.040	-.013	.018	-.020
	cautious	.070	.135	-.025	-.020	.080
1.00	conformism	.119	.059	-.022	.068	-.028
	transparency	.059	.081	.042	.045	-.020
	selectivity	-.022	.042	.180	-.099	.139
	subordination	.068	.045	-.099	.148	-.125
	cautious	-.028	-.020	.139	-.125	.169
Total	conformism	.112	.035	-.023	.028	.008
	transparency	.035	.120	.020	.012	.018
	selectivity	-.023	.020	.106	-.054	.063
	subordination	.028	.012	-.054	.079	-.068
	cautious	.008	.018	.063	-.068	.107

a. The group covariance matrix for group 2.00 cannot be computed because there is insufficient data.

b. The total covariance matrix has 8 degrees of freedom.

Summary of Canonical Discriminant Functions

Eigenvalues

Function	Eigenvalue	% of Variance	Cumulative %	Canonical Correlation
1	2.248 [a]	97.2	97.2	.832
2	.064 [a]	2.8	100.0	.245

a. First 2 canonical discriminant functions were used in the analysis.

Wilks' Lambda

Test of Function(s)	Wilks' Lambda	Chi-square	df	Sig.
1 through 2	.289	4.960	10	.894
2	.940	.248	4	.993

Standardized Canonical Discriminant Function Coefficients

	Function	
	1	2
conformism	1.338	-.321
transparency	-1.301	-.560
selectivity	.029	.827
subordination	-.031	1.010
cautious	.280	.836

Structure Matrix

	Function		
	1	2	
selectivity	-.121	.707	*
cautious	.068	.456	*
conformism	.434	-.442	*
transparency	-.310	-.334	*
subordination	.009	-.292	*

Pooled within-groups correlations between discriminating variables and standardized canonical discriminant functions
Variables ordered by absolute size of correlation within function.

*. Largest absolute correlation between each variable and any discriminant function

Canonical Discriminant Function Coefficients

	Function	
	1	2
conformism	4.147	-.995
transparency	-3.596	-1.546
selectivity	.078	2.275
subordination	-.097	3.122
cautious	.751	2.241
(Constant)	-.373	-2.138

Unstandardized coefficients

Functions at Group Centroids

	Function	
score	1	2
.00	1.556	.128
1.00	-1.072	.038
2.00	.692	-.572

Unstandardized canonical discriminant functions evaluated at group means

Classification Statistics

Prior Probabilities for Groups

score	Prior	Cases Used in Analysis	
		Unweighted	Weighted
.00	.333	3	3.000
1.00	.333	5	5.000
2.00	.333	1	1.000
Total	1.000	9	9.000

Classification Function Coefficients

	score		
	.00	1.00	2.00
conformism	6.273	-4.536	3.385
transparency	-7.714	1.877	-3.522
selectivity	5.739	5.328	4.079
subordination	19.178	19.150	17.076
cautious	15.085	12.910	12.868
(Constant)	-11.234	-9.416	-8.598

Fisher's linear discriminant functions

Table 14: **Pooled One-Stage estimations for *score* variable based on accounting values**

Dependent Variable: Score variable	*Cross-sections included: 9*
Method: Pooled Least Squares	*Total pool (balanced) observations: 9*
Included observations: 1	*White diagonal standard errors & covariance (degree of freedom. corrected)*

Variable	**Coefficient**	**Std. Error**	**t-Statistic**	**Prob.**
Functional conformism	1.204057	0.579968	2.076075	0.0716
Functional transparency	1.399306	0.405927	3.447186	0.0087
Hierarchic selectivity	1.344010	0.439494	3.058084	0.0156
Social subordination	1.231801	0.359132	3.429942	0.0090
Cautious approach	1.581153	0.525978	3.006118	0.0169

[i] Universal Declaration on Cultural Diversity.
[ii] The adopted framework for the expectations derived from a *bounded rationality* approach in which the information is imperfect but is "completely" used by the social subjects.
[iii] All the information about the history and organization of WVS are from WVSs' website.
[iv] http://www.fdic.gov/bank/analytical/fyi/2002/072402fyi.html, accessed on November 4, 2008, 9.30 pm
[v] http://www.sec.gov/news/testimony/ts032906sat.htm, accessed on November 2, 2008, 7.00 pm
[vi] http://www.geert-hofstede.com/ accessed on September 19, 2008, 10.00 pm
[vii] http://www.csrnetwork.com/csr.asp, accessed on November 2, 2008, 8.40 pm
[viii] www.socialauditnetwork.org.uk, accessed on November 3, 2008, 11.00 pm
[ix] The *Accountability Principles for Sustainable Developmen*t first appeared in 1999. In the 2003 version of AA1000AS, these principles were expressed as Materiality, Completeness and Responsiveness, underpinned by a "Commitment to Inclusivity". On October, 24, 2008, *AccountAbility* announced the revisions to its AA1000AS series of standards. The 2008 revisions bring some important changes to these. "Inclusivity" is now a "Foundation Principle", and sits alongside two other principles; Materiality and "Responsiveness", with "Completeness" no longer expressed as a principle.
[x] "Sustainability reporting is the practice of measuring, disclosing, and being accountable to internal and external stakeholders for organizational performance towards the goal of sustainable development", *Sustainability Reporting Guidelines* (p.3), http://www.globalreporting.org/ReportingFramework/ ReportingFrameworkDownloads/ accessed on November 5, 2008, 10.00 pm
[xi] http://www.oecd.org/document/45/0,2340,en_2649_34291_1963117_1_1_1_1,00.html accessed on July 16, 2008, 11.50 a.m.
[xii] The Federation of International Trade Associations' website: http://www.fita.org/ accessed on May 26, 2008, 9.00 pm